

Question	Answer
14.	dilation about $(0, 0)$ with a scale factor of 0.5; $A'(0.5, -1)$, $B'(0.5, -2)$, $C'(2.5, -1)$, $D'(2.5, -2)$
15.	dilation about $(0, 0)$ with a scale factor of 0.6; $A'(6, 3)$, $B(0, -6)$, $C'(3, 9)$
16.	Not similar; there is a scale factor of 2 from V to R and from W to S , but a scale factor of 3 from X to T .
17.	Similar: to map ABC to XYZ , first translate 4 units to the left and 6 units up: $(x, y) \rightarrow (x - 4, y + 6)$. Then dilate by a scale factor of $\frac{2}{3}$: $(x, y) \rightarrow (\frac{2}{3}x, \frac{2}{3}y)$.
18.	The angle measures are the same in the original figure and its image. The side lengths in the image are each 5 times the corresponding side lengths in the original figure.
21.	Reggie made an error. The scale factor from ABC to $A'B'C'$ is $\frac{2}{3}$ not $\frac{3}{2}$.
22.	You can prove they are similar by mapping one to the other with a similarity transformation. To map the baby pool to the larger pool, first translate 8 units to the right and 2 units down: $(x, y) \rightarrow (x + 8, y - 2)$. Then dilate by a scale factor of 2: $(x, y) \rightarrow (2x, 2y)$.
23.	Place the drawing of the smaller building on a coordinate plane in a convenient position in the first quadrant. Apply the dilation with center $(0, 0)$ and scale factor 5: $(x, y) \rightarrow (5x, 5y)$. The image represents the larger building.
24.	vertices of A : $L(-6, 0)$, $M(-3, 6)$, $N(3, 6)$, $O(-3, 0)$; vertices of B : $P(-12, 1)$, $Q(-7, 11)$, $R(3, 11)$, and $S(-7, 1)$